

FEATURE 6: PURCHASE SURFACE WATER IRRIGATION RIGHTS

Description

The acquisition of irrigation rights means water that is now diverted to irrigate fields, upstream from the municipal diversions, would remain in the river and become available to meet municipal and industrial needs. This feature considers the purchase all existing irrigation rights along the main stems of both the Red and Sheyenne Rivers. No construction of any physical features are required. The existing municipal surface water diversions are assumed to be capable of capturing these added flows. The purpose of this estimate is to estimate the cost and the quantity of water that may be made available.

One factor to consider here is the appropriation date associated with these water rights. Most of the city water rights are senior to these irrigation rights so in theory and in practice, in times of severe shortages, these irrigation users could be forced to stop and allow the water flow to continue to the municipal diversion point.

Irrigation operators may agree to sell their water rights directly; or some may insist on selling the land as well, in which case the land can be utilized for grazing or dryland farming. Either way, the cost of the irrigation rights is estimated at \$1,000 an acre (\$1,500 irrigated value minus \$500 dryland value). Lands with existing surface-water irrigation rights along the Sheyenne and Red Rivers total 11,577.6 acres. (See list in Hydrologic Appendix.) If *all* of these rights could be acquired for \$1,000 an acre, the resulting cost would be about \$11.6 million. The full volume of surface water associated with these existing irrigation rights totals 5171 acre feet per year on the Sheyenne River, and 7850 acre feet per year on the Red River. In dry years, when the water is most needed, the actual amount delivered could be much less due to lack of flow in the river systems.

Effect on Projected Shortages

- ! Total M&I shortage for driest year reduced by only 3,310 acre feet.
- ! Worst-year shortages reduced about 40 percent at West Fargo, 21 percent at Valley City, and only 1 percent at Fargo.
- ! Worst-year industrial shortage reduced 25 percent at new industry #5 near Kindred.
- ! No other municipalities or industrial plants receive any benefit
- ! Cost of lost irrigation production has not estimated but should be included

Table 6.1
Cost Estimate

			Initial Cost	Annualized Cost
Land Purchase, Acres	11578	acre	\$11,578,000	\$826,000
Legal & Other Unlisted Items @20%			\$2,320,000	\$165,000
Cost of reduced agricultural production	11578	acre	\$0	\$0
Total Estimate for Feature 6			\$13,898,000	\$991,000